



ARIZONA CLIMATE CHANGE ADVISORY GROUP MEETING #3

DECEMBER 12, 2005



TODAY'S AGENDA

- **CALL TO ORDER (5 MINUTES)**
- **INTRODUCTIONS (5)**
- **REVIEW OF MEETING AGENDA (5)**
- **APPROVAL OF SECOND CLIMATE CHANGE ADVISORY GROUP (CCAG) MEETING SUMMARY (5)**
- **REVIEW OF CCAG PROGRESS AND NEXT STEPS (5)**
- **BRIEFING ON STATE GHG TARGETS AND GOALS (30)**
 - **WORKING LUNCH (5)**
- **REVIEW AND APPROVAL OF INITIAL PRIORITIES FOR TECHNICAL WORK GROUP (TWG) ANALYSIS OF OPTIONS (160)**
- **REVIEW AND APPROVAL OF ARIZONA GREENHOUSE GAS EMISSIONS INVENTORIES AND FORECASTS (5)**
- **CALL TO THE PUBLIC (5)**
- **ANNOUNCEMENTS, DISCUSSION OF AGENDA ITEMS AND TIME FOR NEXT MEETING (10)**

REVIEW OF TEN STEP PLAN

1. DEVELOP INITIAL GHG INVENTORIES AND FORECASTS
2. IDENTIFY CONCEIVABLE GHG MITIGATION OPTIONS
3. IDENTIFY INITIAL PRIORITIES FOR EVALUATION
4. EVALUATE SUPPLY POTENTIAL, COST EFFECTIVENESS;
ANCILLARY AND FEASIBILITY ISSUES AS NEEDED
5. IDENTIFY BARRIERS, ALTERNATIVE POLICY DESIGN NEEDS
6. MODIFY, ADD OR SUBTRACT OPTIONS AS NEEDED
7. EVALUATE CUMULATIVE RESULTS OF OPTIONS
8. ITERATE TO CONSENSUS, WITH VOTES AS NEEDED
9. AGGREGATE OPTIONS INTO IMPLEMENTATION SCENARIOS
10. FINALIZE RECOMMENDATIONS AND REPORT LANGUAGE

DRAFT POLICY DESCRIPTIONS

- **POLICY DESCRIPTION**
- **BAU POLICIES/PROGRAMS**
- **TYPES(S) OF GHG BENEFIT(S)**
- **TYPES OF ANCILLARY BENEFITS AND OR COSTS**
- **ESTIMATED GHG SAVINGS AND COSTS PER MMTCO₂E**
- **DATA SOURCES, METHODS AND ASSUMPTIONS**
- **KEY UNCERTAINTIES**
- **DESCRIPTION OF ANCILLARY BENEFITS AND COSTS, IF NEEDED**
- **DESCRIPTION OF FEASIBILITY ISSUES, IF NEEDED**
- **STATUS OF GROUP APPROVAL**

DRAFT CCAG REPORT

- EXECUTIVE SUMMARY
- BACKGROUND, PURPOSE AND GOALS
 - DESCRIPTION OF THE PROCESS
 - HISTORY AND STATUS OF STATE ACTIONS
 - STATE EMISSIONS INVENTORY & FORECAST
- POLICY RECOMMENDATIONS & RESULTS
 - AGRICULTURE AND FORESTRY
 - ENERGY SUPPLY
 - RESIDENTIAL, COMMERCIAL, INDUSTRIAL
 - TRANSPORTATION & LAND USE
 - WASTE MANAGEMENT
 - CROSS CUTTING ISSUES
- APPENDICES

STATE TARGETS & PLANS

STATE	FORECAST	GOALS	RESULT
AZ	118-147%	?	TBD
CA	34%	2000 BY 2010; 10% BELOW BY 2020; 75% BY 2050	TBD
CT	32%	1990 BY 2010; 10% BELOW BY 2020; 75% BY 2100	100%
MA	?	1990 BY 2010; 10% BELOW BY 2020; 75% BY 2100	?
ME	34%	1990 BY 2010; 10% BELOW BY 2020; 75% BY 2100	100%
NC	122%	?	TBD
NEG	?	1990 BY 2010; 10% BELOW BY 2020; 75% BY 2100	TBD
NJ	?	5% -1990 BY 2005	100%
NM	48-64%	2000 BY 2012; 10% BELOW BY 2020; 75% BY 2050	TBD
NY	24%	5% BELOW 1990 BY 2010	?
OR	38%	1990 BY 2010; 10% BELOW BY 2020; 75% BY 2100	85%
PUGET	37%	1990 BY 2010; 10% BELOW BY 2020; 75% BY 2100	100%
RI	35%	1990 BY 2010; 10% BELOW BY 2020; 75% BY 2100	100%

BREAK



DECISION CRITERIA

- **GHG REDUCTION POTENTIAL (CO₂E)**
- **DIRECT COST PER TON GHG REMOVED**
- **ANCILLARY ISSUES**
 - **CO-BENEFITS, COSTS, ETC.**
- **FEASIBILITY ISSUES**
 - **TECHNICAL, ECONOMIC, MARKET, PROGRAMMATIC, POLITICAL**

TWG PRIORITIES

TWG	# CURRENT PRIORITIES FOR ANALYSIS
ENERGY SUPPLY	12
RCI	11
TRANSPORTATION AND LAND USE	5
AGRICULTURE AND FORESTRY	15
CROSS CUTTING ISSUES	TBD
TOTAL	43

RCI OPTIONS

- **DEMAND-SIDE EFFICIENCY FUNDS, INCENTIVES, AND PROGRAMS**
 - **STATE LEADERSHIP PROGRAMS**
 - **APPLIANCE STANDARDS**
 - **BUILDING STANDARDS/CODES**
 - **“BEYOND CODE” BUILDING DESIGN INCENTIVES AND PROGRAMS**
 - **DISTRIBUTED GENERATION/COMBINED HEAT AND POWER**
 - **DISTRIBUTED GENERATION/RENEWABLE ENERGY APPLICATIONS**
 - **ELECTRICITY PRICING STRATEGIES**
 - **MITIGATING HIGH GWP GAS EMISSIONS (HFC, PFC)**
 - **DEMAND-SIDE FUEL SWITCHING**
 - **INDUSTRIAL SECTOR GHG EMISSIONS TRADING OR COMMITMENTS**
 - **DEMAND-SIDE SOLID WASTE/WASTEWATER MANAGEMENT**
- MEASURES ARE STILL TO BE CONSIDERED BY TWG**

RCI FORECAST

- **TWG RECOMMENDED REVISION:**
 - INCREASE RATE OF GROWTH OF REFERENCE CASE ELECTRICITY USE TO REFLECT EXPERIENCE OF HIGHER GROWTH IN RECENT YEARS, RECENT PROJECTIONS BY UTILITIES FOR SHORT TO MEDIUM TERM, LIKELIHOOD OF CONTINUED HIGH GROWTH
 - INCREASE FORECAST RATE FROM 3%/YR (2005 TO 2020) TO **3.75%/YR FROM 2005 TO 2010**, DECLINING TO **3.5%/YR FROM 2010 TO 2020**

ES OPTIONS

- **RENEWABLE AND LOW-EMITTING ENERGY**
 - ENVIRONMENTAL PORTFOLIO STANDARD
 - PUBLIC BENEFIT CHARGE FUNDS
 - DIRECT RENEWABLE ENERGY SUPPORT: INCLUDING TAX CREDITS AND INCENTIVES, R&D, AND SITING/ZONING
- **EMISSIONS POLICIES**
 - GHG CAP AND TRADE
 - GENERATION PERFORMANCE STANDARDS
 - CARBON INTENSITY TARGET
 - VOLUNTARY UTILITY CO₂ TARGETS AND/OR TRADING
 - CO₂ TAX
- **GRID AND UTILITY POLICIES**
 - REDUCE BARRIERS TO RENEWABLES AND CLEAN DG
 - METERING STRATEGIES
 - PRICING STRATEGIES
 - INTEGRATED RESOURCE PLANNING

BREAK



TLU OPTIONS

- **PASSENGER VEHICLE GHG EMISSION RATES**
 - CALIFORNIA GHG EMISSION STANDARDS (THIS INCLUDES PHASE II OF THESE STANDARDS IF ADOPTED BY CALIFORNIA)
- **LAND USE AND LOCATION EFFICIENCY**
 - SMART GROWTH BUNDLE OF OPTIONS
- **INCREASING LOW-GHG TRAVEL OPTIONS**
 - MULTIMODAL TRANSIT BUNDLE OF OPTIONS
- **FREIGHT**
 - PROMOTE IDLE REDUCTION TECHNOLOGIES
 - ENFORCE ANTI-IDLING
- **ALTERNATIVE FUEL MEASURES ARE STILL BEING CONSIDERED BY THE TWG**

FORESTRY OPTIONS

- **FORESTLAND PROTECTION FROM DEVELOPED USES**
- **REFORESTATION/RESTORATION OF FORESTLAND**
- **FOREST ECOSYSTEM MANAGEMENT – RESIDENTIAL LANDS (INCLUDING EXPANDED USE OF BIOMASS ENERGY AND HARVESTED WOOD PRODUCTS)**
- **FOREST ECOSYSTEM MANAGEMENT – OTHER LANDS (INCLUDING EXPANDED USE OF BIOMASS ENERGY AND HARVESTED WOOD PRODUCTS)**
- **IMPROVED COMMERCIALIZATION OF BIOMASS GASIFICATION AND COMBINED CYCLE**

AGRICULTURE OPTIONS

- **MANURE MANAGEMENT – MANURE DIGESTERS**
- **MANURE MANAGEMENT – LAND APPLICATION**
- **BIOMASS FEEDSTOCKS FOR ELECTRICITY OR STEAM/DIRECT HEAT**
- **ETHANOL PRODUCTION**
- **CHANGE FEEDSTOCKS (OPTIMIZE NITROGEN FOR N₂O REDUCTION) CHANGE FEEDSTOCKS**
- **REDUCE NON-FARM FERTILIZER USE**
- **GRAZING MANAGEMENT**
- **CONVERT LAND TO GRASSLAND OR FOREST**
- **AGRICULTURAL LAND PROTECTION FROM DEVELOPED USES**
- **PROGRAMS TO SUPPORT LOCAL FARMING/BUY LOCAL**

NEXT STEPS CC-ISSUES

- **FORM TWG**
- **IDENTIFY FRAMEWORK AND POTENTIAL APPROACHES**

INVENTORY & FORECAST

- **APPROVAL OF REVISED CALCULATIONS OR APPROACHES FOR ALL SECTORS**
 - **ONLY UPDATE SINCE LAST CCAG MEETING IS THE RCI ELECTRICITY FORECAST; REQUEST APPROVAL TODAY**
 - **ALL OTHER TWG REVISIONS AGREED TO AT LAST CCAG MEETING**

NEXT STEPS TWGs

- **TWGs WORK ON:**
 - **CROSS CUTTING ISSUES**
 - **ADDITION OF BLACK CARBON OPTIONS TO LIST?**
 - **POLICY DESIGN PARAMETERS FOR OPTIONS**
 - **INITIAL ASSESSMENTS OF BENEFITS, COSTS**
 - **SUGGESTED IMPLEMENTATION MECHANISMS**
 - **POTENTIAL BARRIERS TO CONSENSUS**
 - **ADDITIONAL OPTIONS TO CONSIDER**

PUBLIC INPUT, ANNOUNCEMENTS

AGENDA NEXT MEETING

- **CONSIDERATION OF ADDITIONAL PRIORITIES FOR ANALYSIS**
 - INCLUDING BLACK CARBON AND OTHER OPTIONS
- **PROGRESS REPORT ON POLICY DESIGN, ASSESSMENT OF PRIORITY OPTIONS**
 - DISCUSSION, RESPONSE TO POTENTIAL BARRIERS
 - IDENTIFICATION OF ALTERNATIVES AS NEEDED
- **OTHER ISSUES?**

DATE NEXT CCAG MEETING

- **SUGGESTED:**
 - LATE FEBRUARY, 2006
 - PHOENIX